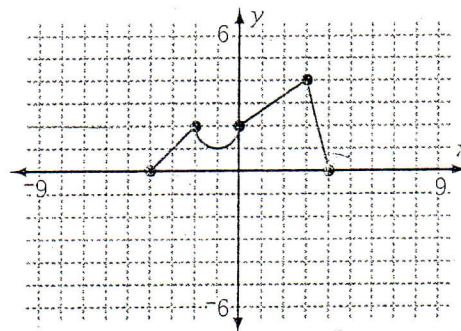


1. Suppose the function pictured is $f(x)$.

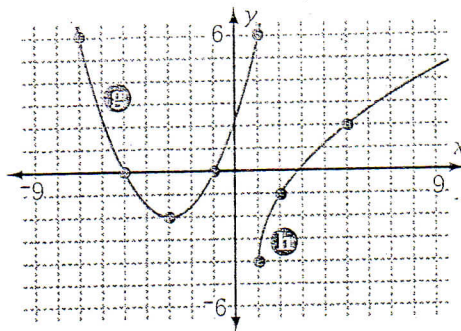
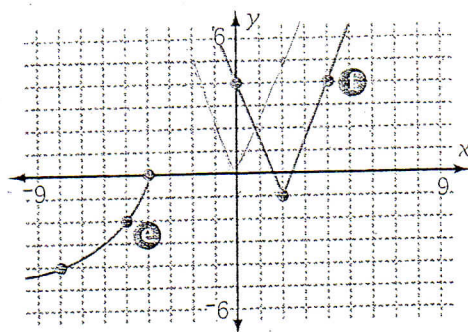
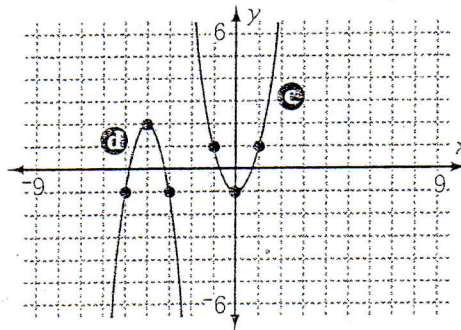
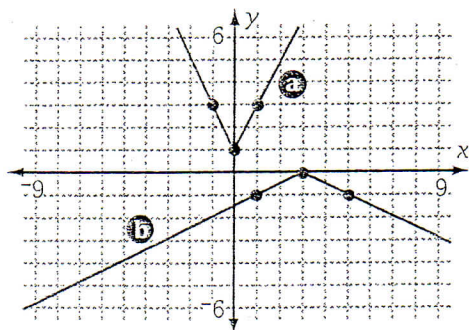
- $f(3) = -?$
- $f(-2) = -?$
- When is $f(x) = 0$?
- When is $f(x) = 2$?
- What is the range, R_f , of f ?
- What is the domain, D_f , of f ?



2. Using the graph in Problem 1 as function f , carefully sketch a separate graph of each transformation.

- | | | |
|----------------|---------------|--------------------------------|
| a. $f(x) - 3$ | b. $f(x - 3)$ | c. $-f(x)$ |
| d. $2f(x) - 3$ | e. $f(-x)$ | f. $f\left(\frac{x}{2}\right)$ |

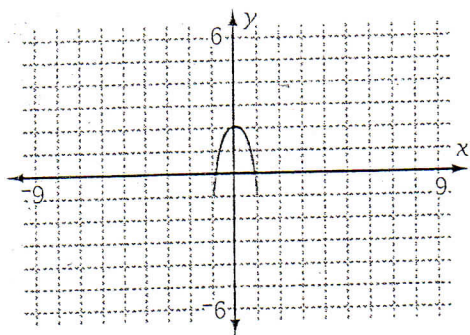
3. Use what you know about translations and stretches to write an equation for each graph a-h. Then check your answer by graphing each equation on your calculator.



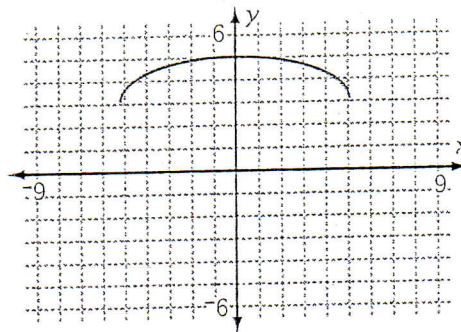
For each graph, name the parent function and write an equation of the graph.

4.

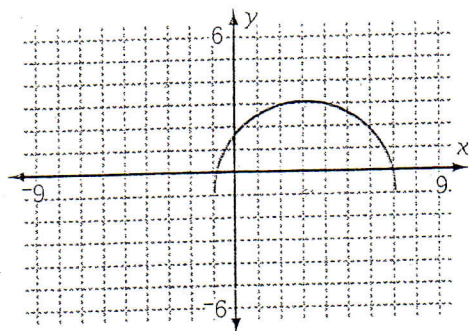
a.



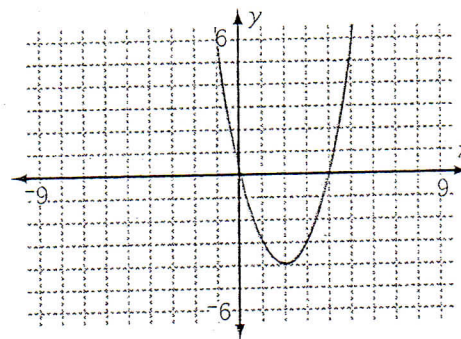
b.



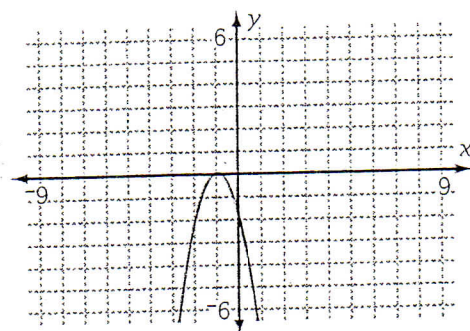
c.



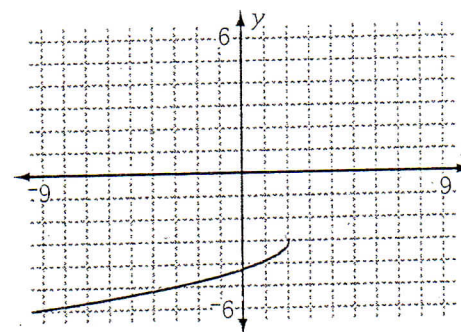
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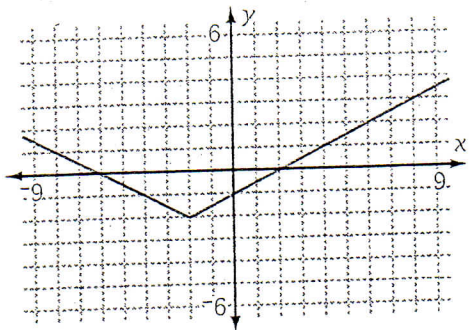
e.



f.



g.



h.

